REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1, 3-6, 9, 11, 12 and 14-17 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth below.

ENTRY OF AMENDMENTS

It is respectfully requested that the present amendment should be entered into the official file in view of the fact that the amendments to the claims automatically place the application in condition for allowance. Alternatively, if the Examiner does not agree that the application is in condition for allowance, it is respectfully requested that the present amendments should be entered for the purposes of appeal. These amendments reduce the issues on appeal by defining over various art rejections.

DRAWINGS

Applicants gratefully acknowledge that the Examiner has approved the proposed drawing corrections filed on November 26, 2002. Applicants are submitted corrected drawings along with the present Amendment.

REJECTION UNDER 35 U.S.C. §102

Claims 1 and 6 stand rejected under 35 U.S.C. § 102 as being anticipated by Regueiro (5,339,776). This rejection is respectfully traversed. Applicants submit that this reference does not show all of the features of the claimed invention.

First, Applicants wish to point out that in the description of this rejection in paragraph 2 on page 2 of the Action, the Examiner has referred to **claim 2**, which has previously been cancelled. The limitations of **claim 2** were incorporated into claim 1 previously; and, accordingly, Applicants will consider these arguments as being directed to claim 1.

The Examiner states that the **Regueiro** reference shows a lubricating apparatus for an engine including a cylindrical relief valve 54 disposed in parallel to the main gallery 22 and portions of crank shaft 24. The Examiner also states that the bases of the relief valve are disposed in a horizontal direction.

Applicants submit that this reference does not teach all of the features of the claimed invention. Claim 1 describes a lubricating apparatus for a horizontally disposed dry sump engine having a combination of elements, including a cylindrical relief valve having a longitudinal axis disposed in the horizontal direction where the longitudinal axis is disposed parallel to the

horizontal longitudinal axis of a main gallery and a horizontal longitudinal axis of the crank shaft.

The **Regueiro** reference does show a cylindrical relief valve 54, but this valve does not have the relationships to the axes of the main gallery and crank shaft as presently described in the claims. As seen in Figure 1 of the reference, the longitudinal axis of the relief valve is in the vertical direction. The longitudinal axis of the crank shaft clearly is in the horizontal direction as presented in the figure. The main gallery 22 is only presented diagrammatically as a line with an arrow in the vertical direction. Even assuming that the longitudinal axis of the main gallery is in the vertical direction and thus parallel to the longitudinal axis of the relief valve, the longitudinal axis of the crank shaft is in the perpendicular direction. Thus, in the reference, these three axes are not parallel as presented in the claim.

Also, the claim now indicates that these three axes are horizontal and that the engine is horizontally disposed. The Examiner has argued that if the engine were vertically disposed, the relief valve would be horizontal. The claim now eliminates this possibility by presenting a horizontally disposed engine having horizontal longitudinal axes for the valve, main gallery and crank shaft. Further, even if the Examiner were correct that the engine could be vertically disposed, the

relative directions of the three axes still would not be met. Further, Applicants submit that it would not be obvious to change the direction of the axes without some motivation for doing so. For these reasons, Applicants submit that claim 1 is allowable.

REJECTION UNDER 35 U.S.C. § 103

Claims 3-5 stand rejected under 35 U.S.C. § 103 as being obvious over Regueiro in view of Yamanaka et al. (4,638,856) and Niizato et al. (4,928,641). This rejection is respectfully traversed. Applicants submit that claims 3-5 would not be obvious over this combination of references.

First, Applicants question how the **Niizato et al.** reference is being applied in this rejection. The final paragraph under paragraph 4 on page 4 of the Action describes this reference. However, this reference is described as modifying the **Takahashi et al.** reference which is not included in the statement of the rejection. The Examiner is requested to clarify which references are being applied. Also, Applicants question what teaching of **Niizato et al.** is being combined. The Examiner states that it teaches the use of an L-shaped valve path. However, the Examiner also cites the **Yamanaka et al.** reference to show an L-shaped body. Applicants request the Examiner to clarify this issue.

Applicants submit that claims 3-5 are allowable over this combination of references based on their dependency from allowable claim 1. Applicants submit

that the combination of references still does not meet the terms of claim and accordingly, claims 3-5 are allowable based on their dependency.

Furthermore, claims 3-5 recite a number of additional parts of the relief valve including its body shape, its mounting and how it operates. Applicants submit that this combination of parts further defines over this three-way combination of references.

Claim 8 stands rejected under 35 U.S.C. § 103 as being obvious over Takahashi et al. (5,778,848) in view of Yamanaka et al. and Niizato et al. Claims 9 and 10 were rejected under 35 U.S.C. § 103 as being obvious over Takahashi et al. in view of Yamanaka et al. These rejections are respectfully traversed.

By way of the present Amendment, Applicants have cancelled claim 8 and 10 and added their limitations to independent claim 9. Applicants submit that the combination of references suggested by the Examiner do not render claim 9 obvious thereover.

The Examiner points out that the **Takahashi et al.** reference shows an engine including an oil tank 58 and relief valve 73 provided in the oil tank. The Examiner also points out the **Yamanaka et al.** reference shows an L-shaped body both a discharge port. The Examiner also cites the **Niizato et al.** reference to show an L-shaped valve path. As before, Applicants question how these three

references are combined since both **Niizato et al.** and **Yamanaka et al.** are cited to show an L-shaped body.

Claim 9 now describes a lubricating apparatus for a horizontally disposed dry sump engine having a combination of elements, including an oil tank mounted on an end of an engine to reduce the vertical height, a relief valve in the oil tank, a lead pipe connected to an outlet pipe of an oil filter and having a discharge port formed therein, a cylindrical valve body inserted in the lead pipe, a stopper, a spring and a spring stop, wherein the valve body is received within an L-shaped body and moves against the bias of the spring to open the discharge port and allow the hydraulic pressure to be relieved. Thus, claim 9 now includes a number of limitations not seen in this combination of references.

First, the engine is described as being horizontally disposed. Also, the mounting of the oil tank is said to reduce the vertical height of the engine. The **Takahashi et al.** arrangement shows a vertically disposed engine. The claim now also recites the specific connections of the lead pipe to the outlet pipe of the oil filter, the use of an L-shaped body, the specifics of the valve body and the movement of the valve body against the spring to open the discharge port and allow the hydraulic pressure to be relieved. While the **Yamanaka et al.** reference shows some features of the relief valve, Applicants submit that the combination of

Takahashi et al. and **Yamanaka et al.** does not teach the invention as presently claimed and it would not be obvious thereover.

In regard to the **Niizato et al.** reference, the Examiner stated that Figure 6 shows use of an L-shaped valve path. While Applicants do not disagree with this statement, it is pointed out that this is not a relief valve, but instead is a hydraulic connection switching mechanism provided among the rocker arms 23i, 24i, and 25i. This arrangement acts as a hydraulic valve arrangement and is in communication with the lubricant supply passage 58i inside rocker shaft 22i. The hydraulic pressure within this mechanism causes different ones of the rocker arms to be actuated. However, this arrangement does not in any manner operate as a relief valve and is not mounted within an oil tank. Should the Examiner continue to apply this reference, Applicants request a better understanding of the features the Examiner considers to be used in the rejection. Accordingly, Applicants submit that claim 9 is allowable.

Claim 11 stands rejected under 35 U.S.C. § 103 as being obvious over Takahashi et al. in view of Yamanaka et al. and further in view of Matsuto et al. The Examiner relies on the Matsuto et al. reference to show a strainer provided in an oil tank. However, even if this feature is shown by the reference, Applicants submit that this claim is allowable based on its dependency from claim 9.

Claims 12 and 17 stand rejected under 35 U.S.C. § 103 as being obvious over Regueiro in view of Nanami et al. (5,951,343). This rejection is respectfully traversed. Applicants disagree that these claims would be obvious over this combination of references.

The Examiner cites the **Nanami et al.** reference to show a dry sump-type engine. As above, the Examiner relies on the **Regueiro** reference to show a crank shaft main gallery and relief valve. Claim 12 has been amended in a similar fashion to claim 1 to better specify that the engine is horizontally disposed and that the longitudinal axes of the crank shaft main gallery and relief valve are all horizontally disposed and parallel. As described above in regard to claim 1, the **Regueiro** reference does not teach this feature, and it is also not taught by **Nanami et al.** Accordingly, Applicants submit that claim 12 and claim 17 are patentable over this combination of references.

Claims 14-16 stand rejected under 35 U.S.C. § 103 as being obvious over Regueiro in view of Nanami et al. as applied above and further in view of Yamanaka et al. and Niizato et al. This rejection is respectfully traversed.

First, Applicants question which references are being combined. In the last paragraph of this rejection, the Examiner states that the **Niizato et al.** reference is used to modify the **Takahashi et al.** reference, which is not listed in the statement of the rejection. Also, Applicants question which features of **Niizato et al.** are

utilized in the rejection since the only feature mentioned, the L-shaped valve path, has been stated to be included in the **Yamanaka et al.** teachings.

Applicants furthermore submit that claims 14-16 are allowable based on their dependency from claim 12. Even if the **Yamanaka et al.** and **Niizato et al.** references are added to teachings of **Regueiro** and **Nanami et al.**, Applicants submit that the combination still would not teach the features of claim 12 described above. Accordingly, Applicants submit that claims 14-16 are allowable based on their dependency on claim 12.

NO PROSECUTION HISTORY ESTOPPEL

Claims 1, 9 and 12 are hereby presented in independent form. No prosecution history ***estoppel*** would apply to the interpretation and limitations set forth in claims 1, 9 and 12 and the claims that depend therefrom in view of the fact that this subject matter has been continuously presented since the original filing date of the present application.

CONCLUSION

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse (Reg. No. 27,295) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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0505-0714P
Attachment

#43,360

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please cancel **claims 8 and 10** without prejudice or disclaimer of the subject matter contained therein.

Please amend the claims as follows:

1. (Twice Amended) A lubricating apparatus for a horizontally disposed dry sump engine, comprising:

a cylindrical relief valve, said cylindrical relief valve having a longitudinal axis disposed in a horizontal direction [and], said longitudinal axis being disposed in parallel to a horizontal longitudinal axis of a main gallery and a horizontal longitudinal axis of a crank shaft of the engine.

9. (Twice Amended) A lubricating apparatus for a horizontally disposed dry sump engine comprising:

an oil tank mounted on an end of said engine, so as to reduce a vertical height of said engine; and

a relief valve provided in said oil tank

wherein said relief valve further comprises:

a lead pipe, said lead pipe being connectable to an outlet pipe of an oil

filter, said lead pipe including a discharge port formed therein;

a cylindrical valve body slidably inserted in said lead pipe;

a stopper for restricting movement of said cylindrical valve body in said lead pipe;

a spring for biasing said cylindrical valve body toward said stopper; and

a spring stop for pressing said spring;

wherein said cylindrical valve body is received within a L-shaped body and when moved against the bias of said spring, said discharge port is opened to allow hydraulic pressure in the outlet of the oil filter to be relieved.

12. (Twice Amended) A horizontally disposed dry sump engine, comprising:

a crank shaft having a horizontal longitudinal axis mounted for rotation therein;

a main gallery having a horizontal longitudinal axis extending in a direction parallel to said longitudinal axis of said crank shaft; and

a cylindrical relief valve, said cylindrical relief having a longitudinal axis disposed in a horizontal direction [and], said longitudinal axis being disposed in parallel to said longitudinal axis of said main gallery and said longitudinal axis of said crank shaft.